

IFW

MAIL STOP PCT
Attorney Docket: 26681U

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Group Art Unit: 1624

KIM et al.

Examiner: Unknown

Serial Number: 10/528,461

Filing Date: March 21, 2005

Title: **6-METHYLPYRIDINE DERIVATIVES, METHOD FOR PREPARING THEREOF AND
ANTIVIRAL PHARMACEUTICAL COMPOSITION COMPRISING THE SAME**

TRANSMITTAL LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith for filing in the U.S. Patent and Trademark Office is the following Patent Application:

- (1) Request for Corrected Official Filing Receipt;
- (2) Copy of the Official Filing Receipt with corrections marked in Red;
- (3) Copy of the Cover Page of the Published PCT Application;
- (4) Copy of the Executed Declaration.

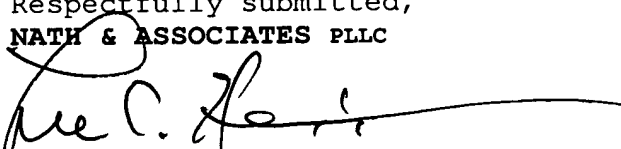
The Commissioner is hereby authorized to charge any deficiency or credit any excess to Deposit Account Number 14-0112.

Respectfully submitted,
NATH & ASSOCIATES PLLC

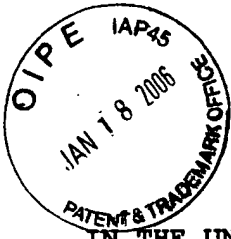
Date January 18, 2006

NATH & ASSOCIATES PLLC
112 South West Street
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By:


Gary M. Nath
Reg. No. 26,965
Lee C. Heiman
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Customer No. 20529

GMN/LCH:sw



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Title: **6-METHYLPYRIDINE DERIVATIVES, METHOD FOR PREPARING THEREOF AND
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REQUEST FOR CORRECTED OFFICIAL FILING RECEIPT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

1. Attached is a copy of the Official Filing Receipt received from the USPTO in the above application for which issuance of a corrected filing receipt is respectfully requested.

2. There is an error with respect to the following data, which is:
XXX incorrectly entered _____ omitted

Error in:

XXX Country of residence of all the (1-7) Inventors
Japan

Correct Data: Country of residence of all the (1-7) Inventors
Republic of Korea

Should any questions or comments arise in connection with the filing of this Request, Applicant respectfully requests a telephone call to the undersigned attorney at the telephone number as shown.

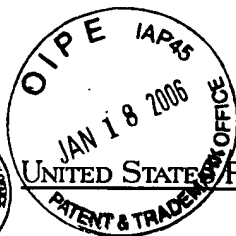
Respectfully submitted,
NATH & ASSOCIATES PLLC

Date January 18, 2006

NATH & ASSOCIATES PLLC
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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/528,461	03/21/2005	1624	500	26681U		3	3

CONFIRMATION NO. 4853

20529
 NATH & ASSOCIATES
 1030 15th STREET, NW
 6TH FLOOR
 WASHINGTON, DC 20005

FILING RECEIPT



OC000000016724814

Date Mailed: 08/15/2005

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

Applicant(s)

Jong-Woo Kim, Anyang-si, JAPAN; Republic of Korea
 Sang-Wook Lee, Anyang-si, JAPAN; Republic of Korea
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 Joong-Chul Shin, Yongin-si, JAPAN; Republic of Korea

Power of Attorney: The patent practitioners associated with Customer Number 20529.

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/KR03/02034 10/02/2003

Foreign Applications

REPUBLIC OF KOREA 10-2002-006-1994 10/11/2002

Projected Publication Date: 11/17/2005

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ******Title**

6-Methylpyridine derivatives, method for preparing thereof and antiviral pharmaceutical composition comprising the same

Preliminary Class

544

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER Title 35, United States Code, Section 184 Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

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NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 April 2004 (22.04.2004)

PCT

(10) International Publication Number
WO 2004/033450 A1

(51) International Patent Classification⁷: C07D 413/10

Gugul-ri, Giheung-eup, Yongin-si, Gyeonggi-do 449-900 (KR). SHIN, Joongchul [KR/KR]; 557-1, Goan-ri, Baekam-myeon, Yongin-si, Gyeonggi-do 449-863 (KR).

(21) International Application Number:
PCT/KR2003/002034

(22) International Filing Date: 2 October 2003 (02.10.2003)

(74) Agent: LEE, Duckro; YEIL Patent & Trademark International, YEILPAT Bldg., 669-17, Yorksam-dong, Kangnam-gu, Seoul 135-915 (KR).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10-2002-0061994 11 October 2002 (11.10.2002) KR

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except US*): B & C BIOPHARM CO., LTD. [KR/KR]; 633-2, Goan-ri, Baekam-myeon, Yongin-si, Gyeonggi-do 449-863 (KR).

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU; IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

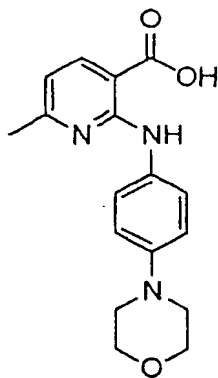
(75) Inventors/Applicants (*for US only*): KIM, Jongwoo [KR/KR]; 9-908 Samhnewtown Apt., 245, Bisan 3-dong, Dongan-gu, Anyang-si, Gyeonggi-do 431-050 (KR). LEE, Sangwook [KR/KR]; 104-302 Geumho Apt., 149-1, Bakdal 2-dong, Manan-gu, Anyang-si, Gyeonggi-do 430-030 (KR). LEE, Geunhyung [KR/KR]; 202 ho, 275-6, Gugul-ri, Giheung-eup, Yongin-si, Gyeonggi-do 449-900 (KR). HAN, Jaemin [KR/KR]; 102-506 Samick Apt., 14, Singal-ri, Giheung-eup, Yongin-si, Gyeonggi-do 449-900 (KR). PARK, Sangjin [KR/KR]; 557-1, Goan-ri, Baekam-myeon, Yongin-si, Gyeonggi-do 449-863 (KR). PARK, Eulyong [KR/KR]; 110-504 Hanseong Apt., 380,

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

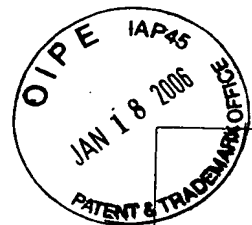
(54) Title: 6-METHYLPYRIDINE DERIVATIVES, METHOD FOR PREPARING THEREOF AND ANTIVIRAL PHARMACEUTICAL COMPOSITION COMPRISING THE SAME



(II)

(57) Abstract: The present invention relates to 6-methylpyridine derivatives useful as an antiviral agent. More particularly, the present invention relates to novel 6-methylpyridine derivatives having an excellent inhibitory effect on replication of Hepatitis C virus (HCV), or pharmaceutically acceptable salts thereof, to a method for preparing thereof, and to an antiviral pharmaceutical composition comprising the compound as an active ingredient. The 6-methylpyridine derivatives of the present invention have an excellent inhibitory effect on replication of hepatitis C virus and thus can be advantageously used as a therapeutic or prophylactic agent of hepatitis C.

WO 2004/033450 A1



DECLARATION FOR PATENT APPLICATION

Attorney Docket:
Page 1 of 3

As a below-named inventor(s), I/we hereby declare that:

My/Our residence(s), post office address(es) and citizenship(s) is/are as stated below next to my/our name(s).

I/We believe I/we am/are the original inventor, first and sole (if only one name is listed below) or the original, first and joint inventors (if plural names are listed below) of the subject matter which is claimed, and for which a patent is sought on the invention entitled:

"6-METHYLPYRIDINE DERIVATIVE, METHOD FOR PREPARING THEREOF AND ANTIVIRAL PHARMACEUTICAL COMPOSITION COMPRISING THE SAME"

the specification of which: (check one)

☐ is attached hereto.☒ was filed on October 2, 2003, as Serial No. PCT/KR2003/002034,and was amended on May 31, 2004 (if applicable).

We hereby state that we have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the patentability of this application as defined by 37 CFR § 1.56.

We hereby claim foreign priority benefits under 35 U.S.C. § 119 of any foreign application(s) for patent or inventor's certificate listed below, and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Applications:

<u>2002-0061994</u> (Application No.)	<u>KR</u> (Country)	<u>11 / 10 / 2002</u> (Day/Month/Year Filed)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<u> </u> (Application No.)	<u> </u> (Country)	<u> </u> (Day/Month/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<u> </u> (Application No.)	<u> </u> (Country)	<u> </u> (Day/Month/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No

I/We hereby appoint the Practitioners associated with the following Customer Number:

Customer Number 20529

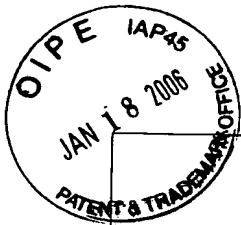
Direct Telephone Calls to:

Gary M. Nath
(202) 775-8383

Send Correspondence to:
NATH & ASSOCIATES, PLLC
Sixth Floor
1030 15th Street, N.W.
Washington, D.C. 20005 U.S.A.

We hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by 35 U.S.C. § 112, first paragraph, I/we acknowledge the duty to disclose material information as defined in 37 CFR § 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

<u> </u> (U.S. Application Serial No.)	<u> </u> (U.S. Filing Date)	<u> </u> (Status--patented, pending, abandoned)
<u> </u> (U.S. Application Serial No.)	<u> </u> (U.S. Filing Date)	<u> </u> (Status--patented, pending, abandoned)



DECLARATION FOR PATENT APPLICATION

Attorney Docket:
Page 2 of 3

I/we hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below:

Application Number(s) _____

Filing Date _____

We hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. ' 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor: KIM, Jong-Woo

Inventor's Signature Kim Jong-woo Date: March 15, 2005

Residence: Anyang-si, Gyeonggi-do

Country of Citizenship: Republic of Korea

Post Office Address: 9-908, Samhometown Apt., 245, Bisan 3-dong, Dongan-gu, Anyang-si, Gyeonggi-do
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Inventor's Signature Lee Sang-wook Date: March 15, 2005

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Full name of third inventor: LEE, Geun-Hyung

Inventor's Signature Geunhyung Lee Date: March 15, 2005

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Post Office Address: 202-ho, 275-6, Gugal-ri, Giheung-eup, Yongin-si, Gyeonggi-do 449-900, Republic
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Inventor's Signature Han Jae-jin Date: March 15, 2005

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Country of Citizenship: Republic of Korea

Post Office Address: 102-506, Samick Apt., 14, Singal-ri, Giheung-eup, Yongin-si, Gyeonggi-do 449-
863, Republic of Korea

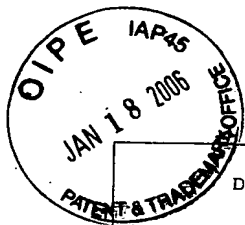
Full name of fifth inventor: PARK, Sang-Jin

Inventor's Signature Park Sang-jin Date: March 15, 2005

Residence: Yongin-si, Gyeonggi-do

Country of Citizenship: Republic of Korea

Post Office Address: 557-1, Goan-ri, Baekam-myeon, Yongin-si, Gyeonggi-do 449-863, Republic of
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DECLARATION FOR PATENT APPLICATION

Attorney Docket:

Page 3 of 3

Full name of sixth inventor: PARK, Eul-Yong

Inventor's Signature Eul-Yong Park Date: March 15, 2005

Residence: Yongin-si, Gyeonggi-do

Country of Citizenship: Republic of Korea

Post Office Address: 110-504, Hanseong Apt., 380, Gugal-ri, Gyeong-eup, Yongin-si, Gyeonggi-do 449-900, Republic of Korea

Full name of sixth inventor: SHIN, Joong-Chul

Inventor's Signature Shin Joongchul Date: March 15, 2005

Residence: Yongin-si, Gyeonggi-do

Country of Citizenship: Republic of Korea

Post Office Address: 557-1, Goan-ri, Baekam-myeon, Yongin-si, Gyeonggi-do 449-863, Republic of Korea